MYAKUSHKO, I.T.

Air blowers for stations. Put' i put.khoz. 10 no.1:10 '66.

(MIRA 19:1)

1. Zamestitel' nachal'nika Darnitskoy distantsii puti, Yugo-Zapadnoy dorogi.

GRISHAYEV, I.A. [Hryshaiev, I.O.]; TEREKHOV, B.A.; MYAKUSHKO, L.K.
[M'iakushko, L.K.]; FURSOV, G.L. [Fursov, H.L.]

1. Fiziko-tekhnicheskiy institut AN USSR.
            (Titanium)   (Air pump)

myAKushko, L.K

B2004

S/120/ 0/000/03/045/055
E032/E514

9.4250

AUTHORS: Grishayev, I. A., Terekhov, D.A., Myakushko, L.K. and
Fursov, G. L.

TITLE: Two Forms of a Titanium Ion-Sorption Pump

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No 3,
pp 144-145

ABSTRACT: A sectional drawing of one of the pumps is shown in
Fig 1. The titanium cylinder T is heated by the
spiral K. The height of the cylinder is 28 mm, the
outer diameter 13 mm and the thickness of the walls
1.5 mm. The pump is based on the absorption of gases
by the cold walls of the body on which an active film
of titanium is continuously evaporated. A simple
ionization system ensures the removal of inert gases.
A part of the spiral K serves as a source of electrons,
and the anode is in the form of molybdenum washers. The
working conditions are as follows: power consumed by
the heater 350 W, temperature of the cylinder 1250 to
1300°C, amount of titanium consumed 0.05 mg/min,
anode voltage 1000 V, anode current 200 mA, starting

Card 1/3

82004
S/120/60/000/03/045/055
E032/E514

Two Forms of a Titanium Ion-Sorption Pump

pressure 10^{-2} mm Hg, pumping speed for air (at 10^{-6} mm Hg) 30 ℓ/sec and pumping speed for helium (at 10^{-6} mm Hg) 0.5 ℓ/sec. The limiting pressure measured by the LM-2 manometer was found to be 5×10^{-8} mm Hg in a sealed-off pump. The warm-up time was less than 30 min and the anode voltage was switched on at a pressure of less than 10^{-4} mm Hg. It is desirable to use a backing pump incorporating a nitrogen trap. A photo-graph of the pump is shown in Fig 2. Fig 3 shows the basic arrangement of another pump of this type which has a larger store of titanium. The titanium cylinder A (10 mm dia., 28 mm long) is fixed on a molybdenum rod and is heated by the electrons emitted by the cathodes K. The screen E prevents the molybdenum holder from becoming too hot. The working character-istics of this pump are as follows: power consumed by the cathodes 300 W, anode voltage 1600 V, anode current 130 mA, consumption of titanium 1 mg/min, starting

Card 2/3   pressure 10^{-4} mm Hg, pumping speed for air (at 2×10^{-7} mm Hg)

82004

S/120/60/000/03/045/055
E032/E514

Two Forms of a Titanium Ion-Sorption Pump

150 ℓ/sec. An active film of titanium will maintain a pressure of 10^{-5} to 10^{-3} mm Hg in a system when the titanium pump is switched off.   Acknowledgment is made to G. A. Mishkin for valuable advice.   There are 3 figures and 2 tables.

(Note: This is a slightly abridged translation)

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UkrSSR
      (Physico-Technical Institute, Ac.Sc., UkrSSR)

SUBMITTED: April 29, 1959

Card 3/3

MYAKUSHKO, V.K. [M'iakushko, V.K.]

Structure of the root system of the sweet cherry Cerasus avium
(L.) Moench. depending on the ecological conditions. Ukr. bot.
zhur. 21 no.5:67-94 '64.   (MIRA 18:2)

1. Otdel geobotaniki Instituta botaniki AN UkrSSR.

MYAKUSHKO, V.K. [M!iakushko, V.K.]

Sweet cherry (Cerasus avium (L.) Moench.) in the forests of the western provinces of the Ukrainian S.S.R. Ukr. bot. zhur. 22 no.2:64-70 '65.
(MIRA 18:4)

1. Institut botaniki AN UkrSSR, otdel geobotaniki.

MYAKUSHKO, V.K. [M'iakushko, V.K.]

Natural reproduction of the sweet cherry Cerasus avium (L.)
Moench in the forests of western regions of the Ukrainian S.S.R.
Ukr. bot. zhur. 21 no.3:56-70 '64   (MIRA 17:7)

1. Institut botaniki AN UkrSSR, otdel geobotaniki.

MYAKUSHKO, Yu.P., kand. selskokhoz. nauk

    Breeding soybean for a high content of protein in seeds.
    Agrobiologiia no.4:557-561 Jl-Ag '65.

                                      (MIRA 18:11)

    1. Vsesoyuznyy nauchno-issledovatel'skiy institut maslichnykh
    i efiromaslichnykh kul'tur, g. Krasnodar.

MYAKUSHKO, YU. P.

"Intervariety Crosspollination of Sunflowers as Related to the Selectivity in Fertili-
zation." Min. Higher Education USSR, Kuban' Agricultural Inst., Krasnodar, 1955.
(Dissertation for the Degree of Candidate in Agricultural Sciences)

SO: Knizhnaya Letopis', No. 22, 1955, pp 93-105

MYAKUSHKO,Yu.P.

Intervarietal hybrids are an important means of increasing
sunflower yields. Masl.-zhir.prom. 20 no.4:5-6 '55.
                                              (MLRA 8:9)
1. Krymskaya ZOSS
                        (Sunflowers)

A\ \ |\ \ v (' \ \ \\', G

USSR / Magnetism. Ferromagnetism   F - 4

Abs Jour   : Ref Zhur - Fizika, No 4, 1957, No 9536

Author   : Anniyev, R.G., Myalikgulyyev, G.
Inst   : Turkmenian University imeni A.M. Gor'kiy
Title   : Investigation of the Change in the Electric Resistivity of
              Molybdenum Permalloy Under the Influence of Magnetization and
              Elastic Deformation.

Orig Pub   : Izv. AN Turkm SSR, 1956, No 2, 45-53

Abstract   : An experimental investigation is made of the longitudinal
              evan galvanomagnetic effect in molybdenum permalloy (81.09%
              nickel, 14.9% iron, 3.2% molybdenum and 0.81% other admix-
              tures) in the inversion field. Acting simultaneously is
              the effective magnetic field (up to 10 oersted) and the e-
              lastic tension force (from 0 to 74.2×10^7 dyne/cm^{-1}). In-
              vestigated were wire specimens of two series (1 = 250 --
              300 mm, d = 0.3 mm): (1) Annealed in forevacuum at 1,000°

Card   : 1/3

USSR / Magnetism . Ferromagnetism   F - 4

Abs Jour   : Ref Zhur - Fizika, No 4, 1957, No 9536

Abstract   : for one hour and then cooled together with the furnace. (2)
             Quenched after annealing at 1,000° in water. The magnetiza-
             tion was measured with a differential coil, and the galvano-
             magnetic effect was measured with an unbalanced double brid-
             ge. Measurements were carried out at room temperature. Cur
             ves are shown for the dependence of the longitudinal galva-
             nomagnetic effect vs the effective magnetic field and the e-
             lastic force and vs the square of the intensity for both se-
             ries of specimens. Examination of the curves shows that with
             simultaneous increase of the magnetization and of the elastic
             deformation, the value of the magnetization of the molybde-
             num permalloy increases, while its electric resistivity de-
             creases. It is shown that the dependence of the longitudi-
             nal galvano-magnetic effect on the square of the intensity

Card   : 2/3

USSR / Magnetism . Ferromagnetism   F - 4

Abs Jour   : Ref Zhur - Fizika, No 4, 1957, No 9536

Abstract   : of the magnetization in the inversion region is linear un-
             der the action of elastic tension, which is an experimental
             verification of one of the fundamental conclusions of the
             Akulov theory of even effects.

Card   : 3/3

137-58-2-3802

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 215 (USSR)

AUTHOR: Myalikgulyyev, G.

TITLE: An Investigation of Variations in the Electrical Resistance
            of Nickel-palladium Alloys in a Longitudinal Magnetic Field
            (Issledovaniye izmeneniya elektrosoprotivleniya splavov
            nikel-palladiy v prodol'nom magnitnom pole)

PERIODICAL: Izv. AN TurkmSSr, 1957, Nr 3, pp 3-12

ABSTRACT: An investigation was made of alloys Ni-0-90% Pd annealed in
            vacuum at 760°C for 12 hours and cooled at a rate of 100°
            day and also water-hardened after holding at 1000° for 10
            hours. The magneto-resistance (MR) and magnetization of
            the specimens (I) were measured. The conclusion from the
            theory of even effects in N.S. Akulov's theory on the linear
            ratio of the MR to I^2 in the region of inversion is essentially
            confirmed for Ni-Pd-alloys as well. The magnitude of the
            longitudinal MR at I_s depends linearly upon the Pd content
            and is in agreement with the Annayev equation: Magneto-
            elektrich. yvaleniya v ferromagnitnykh metallakh (Magnetic
            Resistance in Ferromagnetic Metals),Academy of Sciences,

Card 1/2

137-58-2-3802

An Investigation of Variations (cont.)

Turkmenian ·SSR, Ashkhabad, 1952. The values of the I_S and MR in the interval from weak fields to saturation fields diminishes as the Pd content increases. In the vicinity of the stoichiometric composition of Ni_3Pd, sharp changes observed in $(\Delta R/R)_S$ and in I_S are related to formation of a superstructure. In some Ni-Pd alloys, a linear increase in the absolute magnitude of the longitudinal MR is observed, with a negative sign. The I_S of annealed and hardened specimens differ only insignificantly, while the magnitude of MR is greater for hardened specimens. The resistivity of the alloys increases up to 75 atom.% Pd and then declines.
Bibliography: 30 references.

L. M.

1. **Nickel-palladium alloys—Resistance—Test results**

Card 2/2

137-58-6-13223

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 293 (USSR)

AUTHOR: Myalikgulyyev, G.

TITLE: Study of Variation in Resistivity of Nickel-palladium Alloys in a
            Transverse Magnetic Field (Issledovaniye izmeneniya elektro-
            soprotivleniya splavov nikel'-palladiy v poperechnom magnit-
            nom pole)

PERIODICAL: Izv. AN TurkmSSR, 1957, Nr 5, pp 116-120

ABSTRACT: Verification of the validity of Akuloff's relationship for
             paired effects (1. $\alpha_{||} = -2\alpha_{\perp}$ in the absence of a paraproces-
             sus or a crystallographic and magnetic texture; 2. $\alpha_{||} = \alpha_{\perp}$
             in the presence of strong paraprocessus where α is the volume
             of any paired effect) in annealed samples of Ni-Pd group con-
             taining 0-75% Pd, by measuring the "magnetoresistance" effect
             MRE. In alloys containing up to 20% Pd relationship 1 is quali-
             tatively fulfilled; an increase in Pd content causes deviation from
             it; in alloys containing 72-76% Pd relationship 2 is fulfilled
             which indicates a strong paraprocessus in these alloys. In al-
             loys with 72-76% Pd a linear relationship between the trans-
Card 1/2   verse and longitudinal MRE and $H^{2/3}$ (H - field intensity) is

137-58-6-13223

Study of Variation in (cont.)

noted. Also refer to RzhMet,1958, Nr 2, abstract 3802.

P.S.

1. Nickel-palladium alloys--Resistivity   2. Nickel-palladium alloys--Magnetic facotrs

Card 2/2

MYALIKGULYYEV, G.: Master Phys-Math Sci (diss) -- "Investigation of the gal-
vanomagnetic effect in a system of nickel-palladium alloys". Ashkhabad, 1958.
10 pp (Turkmen State U im A. M. Gor'kiy), 150 copies (KL, No 5, 1959, 117)

MYALIKGULYYEV, G.

Studying the temperature dependence of the long-time galvanomagnetic effect in nickel - palladium alloys. Izv. AN Turk. SSR. no.1:104-110 '59.
(MIRA 12:5)

1.Turkmenskiy gosudarstvennyy universitet im. A.M. Gor'kogo.
    (Nickel alloys--Magnetic properties)
    (Palladium alloys--Magnetic properties)

AUTHOR: Annayev, R. G., Myalikgulyyev, G. and Oraszakhatov, A.

TITLE: The galvanomagnetic effect in iron-molybdenum alloys

PERIODICAL: Akademya nauk Turkmenskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh, khimicheskikh i geologicheskikh nauk, no. 4, 1962, 106–108

TEXT   The longitudinal galvanomagnetic effect in Fe-Mo alloys containing up to 11.7% Mo was studied for the first time. The values of this effect ($\Delta R/R \times 10^4$) and of the saturation magnetization (I_s) (both measured in a saturation field, $H = 920$ oersteds) were, in the order given (in parentheses, the Mo content of the alloy). 15.26, 1760 G (0.34%); 20.00, 1758 G (0.65%); 21.19, 1761 G (1.66%); 30.10, 1760 G (3.36%); 30.40, 1758 G (4.80%); and 62.50, 1674 G (11.7%). The specific electrical resistance ($\rho \times 10^5$) increased with the Mo content, from 1.14 ohm.cm at 0.34% to 2.60 ohm.cm. at 11.7%. It is evident that the galvano-magnetic effect is a linear function of the Mo content and of I_s^2. There are 4 figures.

ASSOCIATION: Turkmenskii gosuniversitet im. A. M. Gor'kiy (The Turkmen State University im A M Gork'iy)

SUBMITTED   January 22, 1962

Card 1/1

ACCESSION NR: AP4014860   S/0202/63/000/006/0010/0014

AUTHORS: Annayev, R. O.; Myalikgulyyev, G.; Orazsakhatov, A.

TITLE: Dependence of longitudinal and transverse magnetostriction of Ni_3Pd alloy on thermal treatment

SOURCE: AN TurkmSSR. Izv. Seriya fiziko-tekhnicheskikh, khimicheskikh i geologicheskikh nauk, no. 6, 1963, 10-14

TOPIC TAGS: magnetostriction, annealing temperature, strain gauge, transverse magnetostriction, superstructure, parity effect, magnetic saturation

ABSTRACT: The longitudinal and transverse magnetostriction of Ni_3Pd has been studied as a function of annealing temperatures. The magnetostriction is measured by means of a wire strain gauge. Both magnetostrictions decrease by increasing the annealing temperature up to 410C and increase after a further raise in the annealing temperature. The nature of the change on the effect of longitudinal and transverse magnetostriction saturation as a function of annealing temperatures indicates the presence of superstructures in the alloy and places the order-disorder transition in the 410-420C temperature range. The results also verify the parity effect law

Card 1/2

ACCESSION NR: AP4014860

which states: the longitudinal parity effect at magnetic saturation is twice the transverse effect with a negative sign. Orig. art. has: 3 formulas, 3 figures, and 1 table.

ASSOCIATION: Turkmenskiy gosudarstvenny*y universitet im. A. M. Gor'kogo (Turkmen State University)

SUBMITTED: 29Jan63   DATE ACQ: 19Feb64   ENCL: 00

SUB CODE: PH   NO REF SOV: 013   OTHER: 000

Card 2/2

ACCESSION NR: AP4040288

8/0202/64/000/003/0013/0017

AUTHORS: Annayev, R. G.; Myalikgulyyev, G.; Yusupov, T. M.

TITLE: Concerning the longitudinal and transverse galvanomagnetic effects of the nickel palladium alloy

SOURCE: AN TurkmSSR. Izv. Ser. fiz.-tekhn., khim. i geol. no., no. 3, 1964, 13-17

TOPIC TAGS: nickel palladium alloy, galvanomagnetic effect, superlattice, Akulov even effect/ P 329 double bridge

ABSTRACT: The longitudinal and transverse galvanomagnetical effects of Ni_3Pd were studied (under similar conditions of thermal processing) to verify the conclusions derived from the theory of even effects. From Akulov's theory the transverse and longitudinal galvanomagnetical effects are linked by $a_s^{(1)} + a_s^{(2)} + a_s^{(3)} = 3 a x_p I_s$. where $\alpha_s^{(1)}$, $\alpha_s^{(2)}$, $\alpha_s^{(3)}$ are the magnitudes of any even effect measured in three mutually perpendicular directions, with a constant direction of saturating magnetization I_s; a is a constant; x_p is sensitivity of the paraprocess; H is the magnetic field intensity. In the absence of the paraprocess, the magnetic and crystallographic textures give a particular rule of the even effects expressed by

Card 1/3

ACCESSION NR: AP4040288

$a_1 = -2a_1$. An Ni_3Pd wire (18 cm long and 0.5 mm in diameter) was bent into a zigzag 23 mm long to give it greater sensitivity to the effect. The specimen was annealed in a partial vacuum at 1000C for 2 hours and quenched in water to produce a completely disordered state of the alloy, and the effects were measured. The specimen was then placed in a furnace at 350C (the temperature controlled to $\pm$ 5C by an automatic electronic potentiometer), annealed for 10 hours, chilled quickly in water to create a specified value of the ordered phase, and the effects measured again. Next, the alloy was again returned to its initial state by quenching at 1000C. The process was repeated with the furnace temperature increased in steps of 25C through the interval 350-525C (in the range 400-450C the steps were 10C). The effect was measured on a P-329 double bridge, which included a galvanometer with a current constant 10^{-9} A·mm/m, permitting resistance measurements to 10^{-6} ohm. The specimen was positioned in a holder allowing it to be orientated at any angle to the electromagnetic field. It was determined that the transverse and the longitudinal galvanomagnetic effects of saturation of the Ni_3Pd alloy decreased in absolute value with an increase of the annealing temperature up to 420C, and then increased with the temperature. The character of the change in both $\left(\frac{\Delta R_\perp}{R}\right)_s$, and $\left(\frac{\Delta R_{||}}{R}\right)_s$ completely verified the presence of an ordered phase (superlattice) in Ni_3Pd and proved that a point of superlattice conversion

Card 2/3

ACCESSION NR: AP4040288

(Kurnakov point) lies in the temperature interval 400-450C. The second law of
N. S. Akulov even effects was verified for all ordered phases of the alloy. Orig.
art. has: 1 table, 2 equations, and 3 figures.

ASSOCIATION: Turkmenskiy gosuniversitet im. A. M. Gor'kogo (Turkmen State
University)

SUBMITTED: 03Dec63   ENCL: 00

SUB CODE: MM   NO REF SOV: 008   OTHER: 000

Card 3/3

WHERIN, A.I., in d.

    Ne design f...
    r ...15-6 ...

L lil,lilj-66   E:/T(d)/E:/T(1)/E:/T(m)/T-2/E:/P(h)   GW   S

ACC NR: AT6018249   SOURCE CODE: UR/3021/64/000/259/0176/0179

AJTHORS: Bilyalov, R.; Burkova, M. V.; Dzhordzhio, V. A.; Dzhurayev, A. D.; Levina,
P. Z.; Myalkovskaya, N. M.; Neushkin, A. I.; Petrosyants, M. A.; Eyvazova, I. L.;   55
Romanov, N. N.
                                                                                                 bl-1

ORG: none -/-

TITLE: Proposal for the construction of a map AT_{250} to improve the meteorological
service for aircraft TU-104

SOURCE: Tashkent. Universitet. Nauchnyye trudy, no. 259. Fizicheskiye nauki, no. 23,
1964. Fizika atmosfery i aviatsionnaya meteorologiya (Physics of the atmosphere and
aviation meteorology), 176-179

TOPIC TAGS: atmosphere, weather map, weather forecasting, aircraft, meteorology

ABSTRACT: The necessity for constructing an AT_{250} map is pointed out. The authors
note that in the majority of cases, the flight height of the TU-104 aircraft is 10.5
km, a height that corresponds to an absolute topography of 250 millibars. It is
argued that very little additional effort would be called for from existing weather
forecasting stations for the construction of the AT_{250} weather maps since these
stations already routinely broadcast information on AT_{200} and AT_{300}. Examples of

Card   1/3

L 44144-66

AT$_{250}$ maps are given. The maps were constructed by interpolating between the data for AT$_{300}$ and AT$_{200}$ (see Fig. 1).
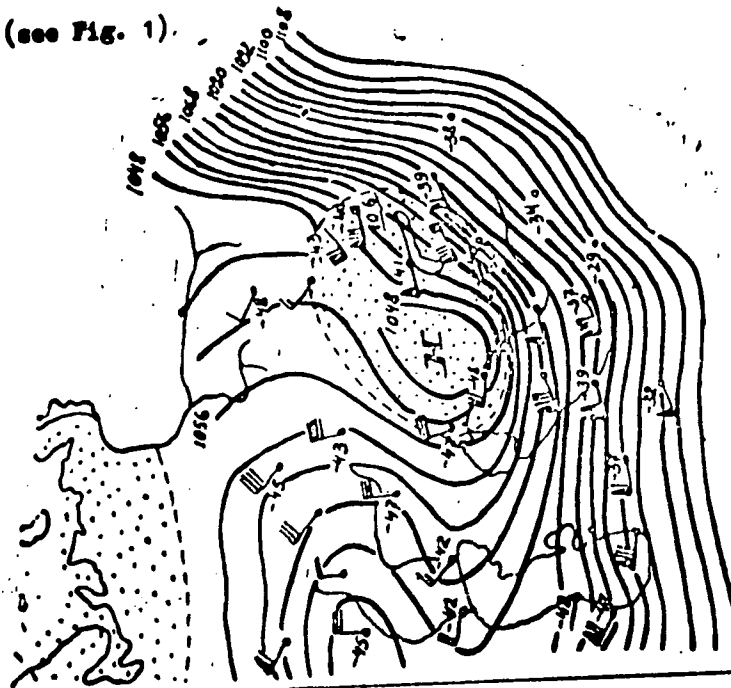
Fig. 1. Map AT$_{250}$ at 3 p.m. on 3 August 1960. Dotted region indicates the stratospheric zone. Squares indicate reports from aircraft crews.
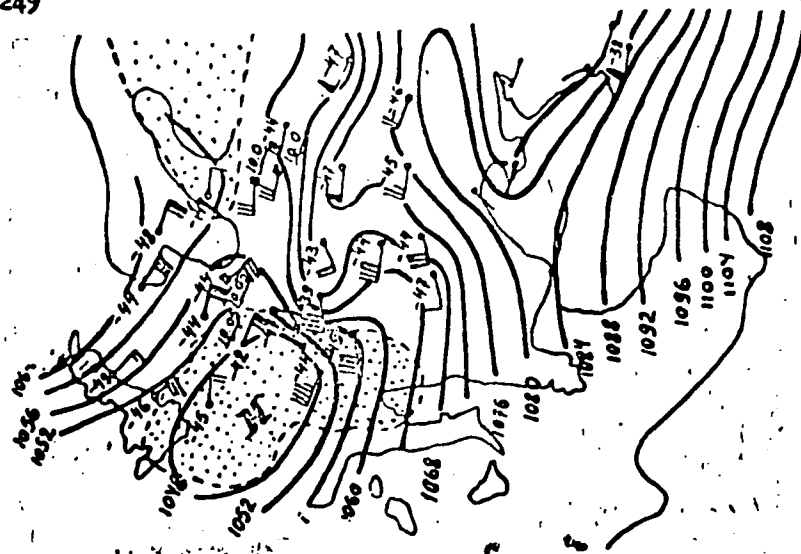
Card 2/3

TO
Card 3/3

It is mentioned that the World Meteorological Organization also recommends a regular construction of AT_{250} maps. Orig. art. has: 2 graphs.

SUB CODE: 04/ SUBM DATE: none

Card 3/3

PAVLOV, A.N.; VASILENKO, V.S.; KOLESNIKOV, I.M.; MYALKOVSKAYA, S.A.;
        POTAPOVA, Ye.A.; UL'IKHINA, N.P.

Present distribution of giant mole rat in northeastern
Ciscaucasia. Zool. zhur. 42 no.5:777-780 '63.   (MIRA 16:7)

1. Rostov-on-Don State Research Anti-Plague Institute and
Daghestan Anti-Plague Station.
                        (Caucasus, Northern--Mole rat)

S. A.; ABDULLAYEV, A. M.; MYALKOVSKIY, A.M.; YULDASHBAYEV, T. S.; POLYAK, Y.

Investigation of Inclasticity of Interactions of Cosmic Ray Particles with Fe and C
Nuclei in 1011 1012ev Energy Region.

37545
S/048/62/026/005/0C9/022
B108/B104

AUTHORS: Azimov, S. A., Abdullayev, A. M., Myalkovskiy, V. M., and
              Yuldashbayev, T. S.

TITLE: Dependence of the mean energy portion transferred to π^0-mesons
              on the primary-particle energy in the range 10^{11}-10^{12} ev

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya. v. 26,
              no. 5, 1962, 613-617

TEXT: The dependence of the coefficient of inelasticity on the primary-
particle energy in the range of 10^{11}-10^{12} ev was studied with an arrangement
of Cherenkov and hodoscope counters and Grigorov's "calorimetric method"
(Tr. Mezhdunarodnoy konferentsii po kosmicheskim lucham, v. 1, Izd. AN SSSR,
M., 1960). The amount of energy transferred to π^0-mesons in the first
interaction process was determined from measurements of the number of
relativistic particles in the electron-photon shower under the lead shield.
The measurements were made with counter II (Fig. 1). The coefficient of
inelasticity varies considerably. Its mean value at $> 10^{11}$ ev is

Card 1/2

Dependence of the mean...

S/048/62/026/005/009/022
B108/B104

17 ± 1.5 %. A correction by about 20 % had to be taken into account because of secondary interaction. Counter I was used to estimate the multiplicity of the secondary particles, which was found to increase slightly with E_0. About half of the particles recorded by counter I are electrons and positrons which appear as a result of the conversion of some of the gammas caused by the π^0-mesons. There are 4 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk UzSSR (Physico-technical Institute of the Academy of Sciences Uzbekskaya SSR)

Fig. 1. Schematic diagram of apparatus.

Legend: I - VII Cherenkov counters; $\Gamma_1 - \Gamma_4$ hodoscope.

Card 2/2

L 41708-65   EWG(j)/EWP(e)/EWT(m)/EPF(c)/EWP(i)/EPR/T/EWP(b)/EWA(m)-2   Pr-4/
ACCESSION NR: AR5008411   Ps-4   WW/WH   UR/0058/65/000/001/V027/V027

SOURCE: Ref. zh. Fizika, Abs. 1V192

AUTHORS: Azimov, S. S.; Abdullayev, A. M.; Lugovskoy, V. B.; Myalkovskoy, V. M.;
Tokarskiy, V. B.; Yuldashbayev, T. S.

TITLE: Study of the inelasticity of the interaction of particles with heavy
nuclei at energies 70 - 700 BeV

CITED SOURCE: Dokl. AN UzSSR, no. 4, 1964, 18-21

TOPIC TAGS: inelastic scattering, particle interaction, inelasticity coefficient,
heavy nucleus interaction, cosmic particle

TRANSLATION: The authors investigated the dependence of the inelasticity coeffi-
cient ($\overline{K}$) on the primary energy in the primary-energy interval 70 - 700 BeV. The
measurements were made with the aid of a calorimeter consisting of Cerenkov and
scintillation counters, with layers of iron and lead absorbers placed between the
counters. Showers were selected with energies larger than 60 BeV. The showers

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L 41708-65
ACCESSION NR: AR5008411

were broken down into a series of energy intervals, in each of which the average
was obtained of the coefficient of inelasticity for the formation of π^0 mesons
$(\bar{K}_{\pi^0})$. Taking into account the experimental corrections, the average value of the
inelasticity of the interaction between the particles and iron nuclei, in the
energy region $E_0 \geq 3 \times 10^{11}$, was found to be $\bar{K}_{\pi^0}^{Fe} = 0.22 \pm 0.2$, consequently $K^{Fe} =$
$= 3\bar{K}_{\pi^0}^{Fe} = 0.66 \pm 0.06$. The coefficient of inelasticity for the interaction with
carbon nuclei was measured by introducing graphite filters into the calorimeter,
and was found to be $K^C = 0.48 \pm 0.06$. The average value of the inelasticity coef-
ficient for the interaction between cosmic particles and iron nuclei, $\bar{K}^{Fe}$, depends
little on the energy of the incident particles in the interval 70 - 700 BeV. The
data obtained agree with the concept of successive collisions of the primary par-
ticles with the individual nucleons of complex nuclei in the energy region
$E_0 \geq 10^{11}$ eV. Ya. M.

SUB CODE: NP   ENCL: 00

Card 2/2

L 40707-65   EWG(j)/EWT(m)/FCC/T   IJP(c)

ACCESSION NR: AP5012316   UR/0048/64/028/011/1773/1775

AUTHOR: Azimov, S. A.; Abdullayev, A. M.; Lugovskoy, V. B.; Myalkovskiy, V. M.;
Tokarskiy, V. B.; Yuldashbayev, T. S.

TITLE: Inelasticity of the interaction of cosmic particles with light and heavy
nuclei / Report of All-Union Meeting on Cosmic Rays Physics, held in Moscow from
October 4 to 10, 1963 /
SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 28, no. 11, 1964, 1773-1775

TOPIC TAGS: cosmic ray, particle interaction, nucleus, nuclear particle

ABSTRACT: The relationship between the coefficient of inelasticity and primary
energy was studied in the interval from 70 to 700 Bev using the calorimeter of
a Cerenkov counter. Measurements were made at the mountain station of the
Institute of Nuclear Physics of the Uzbek SSR Academy of Sciences in Kum-Bel'
pass at an altitude of 3200 meters above sea level. The coefficient was found
to be only slightly dependent on the energy of the incident particles in this
energy interval. Values of the coefficient are given for iron and carbon.
Orig. art. has: 1 figure, 2 formulas, and 1 graph.

Card 1/2

L 40707-65

ACCESSION NR: AP5012316

ASSOCIATION: Institut yadernoy fiziki Akademii nauk UzSSR (Institute of
Nuclear Physics, Academy of Sciences, UzSSR)

SUBMITTED: 00   ENCL: 00   SUB CODE: AA, NP

NO REF SOV: 002   OTHER: 001   JPRS

Card 2/2

Щ.., I.

Agriculture

Nizhnevo animal breeders. Briansk, Brianskii rabochii, 1951.

Monthly List of Russian Accessions, Library of Congress____June____1952. Unclassified.

MYALO, I. I.

MYALO, I. I.: "Material on a study of anaplasmosis and babesiosis of sheep
with combined invasion." All-Union I_nst of Experimental Veterinary
Medicine, Min Agriculture USSR. Moscow, 1956. (Dissertation for the
Degree of Candidate in Veterinary Science.)

Knizhnaya Letopis'
No 32, 1956. Moscow.

USSR/Zooparasitology. Parasitic Protozoa. Sporozoa.   G

Abs Jour: Ref. Zhur. Biol., No 23, 1958, 103995

Author   : Myalo, I. I.

Inst   : Moscow Veterinary Academy

Title   : The Problem of the Survival and Pathogenicity of Anaplasma When Preserved In Vitro.

Orig Pub: Tr. Mosk. vet. akad., 1957, 19, No 1, 339-343

Abstract: Blood of nine sheep afflicted with anaplasmosis was utilized for the study of the preservation of the anaplasmas in various preservatives. The parasites maintained their pathogenicity in citrated blood up to 82 days. They lived in this medium at 3-5° up to 94-104 days and in glucose-sucrose-citrate solution up to 334 days; during this time, the division of the anaplasmas into 2, 3, and 4 individuals was observed. The anaplasmas

Card 1/2

USSR / Diseases in Animals. Diseases Caused by Protozoa   R

Abs Jour: Ref Zhur-Biologiya, No 16, 1958, 74228

Author   : Myalo, I.I.

Inst   : Moscow Veterinary Academy

Title   : On Several Features of the Clinical Appearance of
           Anaplasmosis and Babesiosis in Sheep with Mixed
           Infection

Orig Pub: Tr. Mosk. vet. akad., 1957, 19, No 1, 344-349

Abstract: Four types of mixed infestation are noted. Under
          the first, signs of anaplasmosis and babesiosis were
          observed. The disease in sheep was severe, with
          constant fever (41.8 degrees), but the onset is
          imperceptible, lasted seven to eight days, ended
          fatally. Under the second type of illness, signs

Card 1/3

USSR / Diseases in Animals. Diseases Caused by Protozoa   R

Abs Jour: Ref Zhur-Biologiya, No 16, 1958, 74228

were typical for anaplasmosis and babesiosis. The
pathological-anatomical picture corresponded to
the mixed infestation. -- A. D. Musin

Card 3/3

MYALO, I.I.

Polychloropinene in fly control. Med.paraz.i paraz.bol. no.5:
616-617 '61. (MIRA 14:10)

1. Iz laboratorii arakhnoentomologii i protozoologii Dal'nevo-
stochnogo nauchno-issledovatel'skogo veterinarnogo instituta.
      (INSECTICIDES)   (PINENE)   (FLIES--EXTERMINATION)

MYALO, I.I.

Polymorphism of the species Babesiella ovis Babes, 1892. Zool.
zhur. 40 no.10:1453-1456 0 '61.   (MIRA 14:9)

1. Far Eastern Research Veterinary Institute, Blagoveshchensk-on-
Amur.   (Piroplasmosis, Ovine)

MYALO, I.I., starshiy nauchnyy sotrudnik; FOMIN, Yu.V., starshiy vete-rinarnyy vrach

The ANZh-2 truck-mounted liquid manure spreader for the control of bloodsucking insects. Veterinariia 39 no.6:76-77 Je '62
(MIRA 18:1)

1. Dal'nevostochnyy nauchno-issledovatel'skiy veterinarnyy institut (for Myalo). 2. Volkovskiy myaso-molochnyy sovkhoz Amurskoy oblasti (for Fomin).

GONCHAROV, I.Ye., kand. veterin. nauk; MYALO, I.I., kand. veterin. nauk;
GORODOVICH, N.M., veterin. vrach

Sprayer with a hand pump. Veterinariia 40 no.10:62 O'63.
(MIRA 17:5)

1. Dal'nevostochnyy nauchno-issledovatel'skiy veterinarnyy
institut.

MYALO, I.I.

Production and use of hexachloran bricks and filings for the control of bloodsucking insects. Med. paraz. i paraz. bol. 33 no.5:618-619 S-O '64.   (MIRA 18:4)

1. Laboratoriya arakhnoentomolcgii i protozoologii Dal'nevostochnogo nauchno-issledovatel'skogo veterinarnogo instituta.

MYALO, I.I., kand. veter. nauk

  Spraying animals with insecticides. Veterinariia 41 no.7:
  89-90 Jl '64.   (MIRA 18:11)

  1. Belorusskiy nauchno-issledovatel'skiy veterinarnyy institut.

MYALO, Ye.G.

Ecology of shore-water plants. Biul. MOIP. Otd. biol. 65 no. 6:92-
98 N-D '60.   (MIRA 14:2)
           (VOLGA-AKHTUBA FLOOD PLAIN—BOTANY—ECOLOGY)

TUPIKOVA, N.V.; MYALO, Ye.G.

Food of the water vole and methods of studying it. Vop. ekol. 4:
150-152 '62.   (MIRA 15:11)

1. Gosudarstvennyy universitet, Moskva.
        (Water voles) (Animals, Food habits of)

MYALO, Ye.G.; RODMAN, L.S.

Flood land forests in the southeast of the European U.S.S.R. Vest.
Mosk. un. Ser. 5: Geog. 17 no.4:67-70 Jl-Ag '62.   (MIRA 16:1)
(Forests and forestry)

MYALO, Ya.G.

Characteristic features of reed distribution within its habitat.
Biul. MOIP. Otd. biol. 67 no.1:83-95 Ja-F '62.   (MIRA 15:3)
(REED (BOTANY))

MYALOK, I.I., kand. veter. nauk; GONCHAROV, I.Ye., kand. veter. nauk

Controlling blood-sucking insects on Amur Province farms.
Veterinariia 37 no.6:71-73 Je '60.   (MIRA 16:7)

1. Dal'nevostochnyy nauchno-issledovatel'skiy veterinarnyy
institut.
              (Insect baits and repellents)

MYAMIKEYEV, V. (Miass, Chelyabinskaya oblast')

Repair of KIP-5 reductors. Pozh.delo 7 no.3:25-26 Mr '61.
(MIRA 14:5)
(Gas masks)

MYAMLIN, A. N. (Eng.)

"Experience With Technical O eration of the "Strela 1" Machine and Its Modernization"
a paper presented at the Conference on Methods of Development of Soviet Mathematical
Machine-Building and Instrument-Building, 12-17 March 1956.

Tran&slation No. 596, 8 Oct 56

MYAMLIN, A.N.

9(5)   PHASE I BOOK EXPLOITATION   SOV/3176

Problemy kibernetiki, vyp. 2 (Problems of Cybernetics, No. 2)
Moscow, Fizmatgiz, 1959. 323 p. Errata slip inserted. 18,000
copies printed.

Ed.: A. A. Lyapunov; Compilers-Editors: O. B. Lupanov,
B. Tu. Pil'chak. S. V. Yablonskiy, and Yu. I. Yanov; Eds.:
A. A. Konoplyankin, and M. L. Smolyanskiy; Tech. Ed.:
S. N. Akhlamov.

PURPOSE: The purpose of this collection of articles is to organize
scientific papers on cybernetics and to unite the efforts and
interests of Soviet scientists working in this field.

COVERAGE: This is the second volume of "Problemy kibernetiki",
dealing with problems of biology, mathematics and engineering
as they relate to cybernetics. The first volume, which appeared
in 1958, considered problems of programming, machine translation
and computer design. Future volumes propose to include a still
greater number of subjects related to cybernetics. The editors
list 5 recent Soviet books (including 2 translations) dealing
with cybernetics. They thank the following persons for their
help in preparing the book for publication: O. V. Vakulovskaya,
E. L. Gavrilova, A. A. Muchnik, B. I. Finikov, M. L. Tsetlin
and V. S. Shtarkman. References follow each article.

PART IV.   CONTROL SYSTEMS AND COMPUTERS

Ruslin, A.N., and V.K. Smirnov (Moscow). Operational Cathode-ray
Tube Storage Device   191
The authors describe the principle of operation of the storage
device for the Soviet computer "Strela-1", which consists of a
cathode-ray tubes of the "potentialoscop" type, with a storage
capacity of 2048 words of 43 bits. No references are given.

Bordo, N.G., V.S. Gurfinkel', A.Ye. Kobrinskiy, A.Ya. Sysin,
M.L. Tsetlin, and Ya.S. Yakobson (Moscow). On the Bio-electric
System of Control   203
The article deals with the utilization of biological myoelec-
tric currents in the operation of technical devices. It also
describes the principles of operation and design of a model of
a servo-drive built for this purpose. There are 12 references.
5 Soviet (1 translation), 2 German and 5 English.

PART V.   CONTROL PROCESSES IN LIVING ORGANISMS

Bernshteyn, N.V. (Sverdlovsk), and K.A. Maass (Berlin).
On Statisticity and Amplifier Principle in Biology   213
The article concerns problems of circulation of hereditary in-
formation from generation to generation and the physical process
of its biological storage in living organisms. The authors
summarize investigations in that field. There are 52 references,
16 Soviet (5 translations), 18 English, 14 German, and 4 French.

Kruglinskiy, L.V. (Moscow). Investigation of Extrapolative
Reflexes in Animals   229
The article deals with the physiology of the activity of the
nervous system in animals. The article, according to the
editor, is of great interest for the study of cybernetics
since it concerns relations between biology, engineering and
mathematics in the investigation of control processes occurring
in living organisms. There are 11 references: 9 Soviet
(2 translations), and 2 English.

PART VI.   PROBLEMS OF MATHEMATICAL LINGUISTICS

Kulagina, O.S., and O.V. Vakulovskaya (Moscow). Experimental
Translations From French Into Russian on the "Strela" Computer   283
Mathematicians of the Soviet Union have developed a programming
technique of operational programming based on an external note-
tion that is written linearly across the page. This operational
programming was tested on translations from French into Russian.
O.S. Kulagina and I.A. Mel'chuk. These algorithms assume the
existence of a special vocabulary which contains not words but
ideas. The authors give examples of translations obtained and
used in eliminating errors. No references are given.

Kulagina, O.S. (Moscow). Operational Description of Translation
Algorithms and Automatizing the Process of Their Programming   289
Mathematicians of the Soviet Union have developed a programming
technique of operational programming based on an external nota-
tion that is written linearly across the page. This operational
programming was tested on translations from French into Russian. The
author describes the class of logical operators used. The
sequence of operators will indicate: self sequence of performance.
The following types of operators are: condition, readtitle
all neutral finish, half literations.

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S/141/59/002/06/018/024

AUTHORS: Myamlin, A.N., Vershubskiy, V.Yu, and Naumov, E.I.

B192/E382

TITLE: High-density Recording of Digital Information on a Magnetic Drum

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, 1959, Vol 2, Nr 6, pp 998 - 1004 (USSR)

ABSTRACT: The recording density for digital information on a magnetic drum depends on the construction of the recording head, the magnitude of the gap between the drum and the head, the velocity of the drum relative to the head, duration of the signals to be recorded and the quality and thickness of the magnetic material of the drum. The majority of the above factors are interrelated and the principal factors which limit the density of the information are the geometry of the head and the magnitude of the gap between the head and the magnetic coating of the drum. An attempt was made to improve these factors. A recording head was designed. This is shown in Figure 1. The head is in the form of a horseshoe made of a material having a high permeability. The winding of the head consists of a single turn which forms also the secondary

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E192/E382

High-density Recording of Digital Information on a Magnetic Drum

winding of the transformer. The core of the transformer
has a diameter of 3 mm. The primary winding of a trans-
former consists of 45 turns of the wire PEV having a
diameter of 0.1 mm. The secondary winding is in the form
of a square loop of copper foil having a thickness of 15 μ.
The lower portion of this loop enters into the "horseshoe".
The width of the pole-pieces of the head is 1 mm. The
inductance of the head is 9 μH. Such heads were investi-
gated with magnetic drums coated with ferro-varnish and
nickel-cobalt coatings. It was found that the latter
gave a better signal/noise ratio than the former. The
repetition period of the recorded pulses varied from 1.5
to 20 μs, the duration of a pulse being 0.4 to 1.5 μs.
The amplitude of the recorded signal varied from 0 to 4 A.
Figures 2 show the oscillograms of some of the recorded
signals. In order to reduce the gap between the head and
the drum the so-called "floating" suspension of the head
was adopted. The suspension system consisted of a fork,
a frame and the "floating" block proper. This permitted

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High-density Recording of Digital Information on a Magnetic Drum

the system to set itself in parallel with the generatrix
and "follow" the surface of the drum. The suspension
system was made as light as possible so that its inertia
did not effect the stability of the gap in the presence
of an eccentricity in the drum. The system comprised a
device which permitted the floating block to be "pressed"
to the drum with a predetermined force. The floating
block of the magnetic head was investigated with drums
having diameters of 200 and 600 mm. The linear velocity
of the drums was 30 m/s. Some of the experimental results
of these tests are shown in Figures 3; the upper photo-
graph shows the pulses recorded by means of a fixed head,
while the lower photograph gives the same pulses recorded
by means of a head furnished with a floating suspension.
The article contains an appendix devoted to the analytical
investigation of the resolving power of the magnetic head
(Figure 4). It is shown that the resolution of the head
when used for reading can be improved by employing only
the H_x- component of the magnetic field (Figure 4).

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E192/E382

High-density Recording of Digital Information on a Magnetic Drum

There are 5 figures and 5 references, 3 of which are English and 2 are Soviet.

ASSOCIATION: Matematicheskiy institut AN SSSR (Mathematical Institute of the Ac.Sc., USSR)

SUBMITTED: July 15, 1959

Card 4/4

ACCESSION NR: AT3012131   S/2967/63/000/000/0150/0156

AUTHORS: Myamlin, A. N.; Vershubskiy, V. Yu.; Naumov, E. I.

TITLE: High density digital information recording on magnetic drum

SOURCE: Voprosy* vy*chislitel'noy matematiki i vy*chislitel'noy tekhniki. Moscow, 1963, 150-156

TOPIC TAGS: digital information, magnetic drum, resolving power, magnetic head, floating suspension, lifting force, oscillograph

ABSTRACT: The recording limit for a magnetic drum is shown to be determined by the resolving power of the magnetic head. The resolving power, in turn, depends on the front gap size of the head and the clearance between the head and magnetic carrier. To maintain these small clearances regardless of temperature changes and eccentricity, a floating suspension is proposed for the drum (see Fig. 1 of the Enclosures), with a moving plate or a rotating cylinder applying a lifting force P on the suspended plate in a viscous incompressible medium. Two such drums, 600 and 200 mm in diameter, were investigated with gap size determined by light beam measurements. The drum speed was 30 m/sec and the floating plate was 10 x 15 mm in size. Oscillographic stability studies indicated a stable gap for eccentricities up to

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ACCESSION NR: AT3012131

100 microns. In conjunction with the floating suspension, the design of a small-size magnetic head is presented (Fig. 2 of the Enclosures). The primary winding consists of 45 loops of 0.1 mm conductors (type PEV-2). The secondary winding is a 15 micron copper foil. The system records 16 symbols on 1 mm length. Orig. art. has: 11 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 22oct63

ENCL: 02

SUB CODE: EE

NO REF SOV: 002

OTHER: 000

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Fig. 1. Schematic of floating suspension

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ACCESSION NR: AT3012131

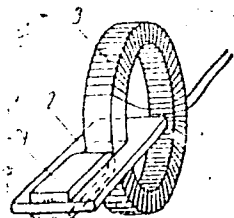

Fig. 2.   Magnetic head
1 - principal magnetic head, self floating
2 - plane linear conductors
3 - transformer

Card 4/4

ACCESSION NR: AT3012129   S/2967/63/000/000/0136/0142

AUTHORS: Myamlin, A. N.; Mikhalev, V. M.; Kuzin, Ye. P.

TITLE: Arithmetic device for universal electronic computers with controls and integrated operations

SOURCE: Voprosy* vy*chislitel'noy matematiki i vy*chislitel'noy tekhniki. Moscow, 1963, 136-142

TOPIC TAGS: electronic computer, integrated operation, summator, pulse device, paraphase output, logical control, 6Zh2P lamp, 6N6P lamp

ABSTRACT: A special logical scheme arithmetic device using tube elements for high-speed operations at 1 megacycle frequency has been discussed. The summator in the arithmetic computer is a potential machine and the remaining circuitry, a pulse device. The summator uses type 6Zh2P and 6N6P lamps and records with a synchronized input. The device has three operating recorders, with one recorder connected to a paraphase output. One paraphase output is considered sufficient for any arithmetic operation. The arithmetic device operates with 39 discharge codes: 6 magnitude order discharges, 30 mantissae including signs, and 3 control discharges. To

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ACCESSION NR: AT3012129

ensure execution of an operation, the logical control method mod (q^m-1) is used where q - fundamental calculation system and m - quantity of control discharges. The control recorder is connected by means of a summator through an electron tube and a phase shifter. The control itself consists of a counter, decoder operation, and a decoder with a central control operation. Each arithmetic operation consists of an aggregate of micro-operations transmitting numbers from the register through the shifter and summator. This arithmetic device multiplies in 18 msec, does logical operations in 8 msec, divides in 40 msec, and takes square root in 90 msec. Orig. art. has: 5 figures.

ASSOCIATION: none

SUBMITTED: 00   DATE ACQ: 22Oct63   ENCL: 00

SUB CODE: EC   NO REF SOV: 000   OTHER: 000

Card 2/2

MYAMLIN, N.M.

    Moscow (Province) Economic Region. Mashinostroitel' no.8:5-7 Ag '60.
                                                      (MIRA 13:9)

    1. Zamestitel' nachal'nika Tekhnicheskogo upravleniya Mosoblsovnarkhoza.
            (Moscow Province--Machinery industry)

MYALL, L. A.

MYALL, L. A. -- "Radiation Conduct... ... ..." Cand ... ...
Sci, Moscow Mechanics Inst, Moscow ... . (... ... ... --P ... , Jun ...

So: Su: lo , 02 Jul ... ...

MYAMLIN, V.A.

USSR/ Physics - Nuclear physics

Card 1/1   Pub. 22 - 10/40

Authors   : Myamlin, V.A.

Title   : Deuteron decomposition by electron bombardment

Periodical   : Dok. AN SSSR 99/3, 377-380, Nov 21, 1954

Abstract   : A description is given of deuteron decomposition by electron bombardment, which takes into account the asymmetry of the primary state of the deuteron. Some polarization effects of an electron are pointed out. A relationship between an effective cross-section of the photodecomposition of an electron and the decomposition of a deuteron, due to electron bombardment, is established. Independence of the mentioned relationship from the wave function (ψ) of a deuteron, inside the atom is stated. Four references; 1-USSR and 3-Foreign (1931-1948).

Institution: .....

Presented by: Academician M.A. Leontovich, August 31, 1954.

USSR/Nuclear Physics - Nuclear quadrupole moment   FD-2362

Card 1/1   Pub. 146 - 27/34

Author   : Myamlin, V. A.

Title   : Taking into account of the quadrupole moment of a nucleus in the
               scattering of electrons

Periodical   : Zhur. eksp. i teor. fiz. 28, 756-758, Jun 1955

Abstract   : In the present note the author attempts to evaluate the influence
               of the quadrupole moment of a nucleus upon the effect of elastic
               scattering of electrons on nuclei, namely by employing the method
               of approximation of Born and ideas of others (Vachaspati and E.
               Baranger, in Phys. Rev., 1954). He finds the effective cross-
               section of scattering of an electron on a nucleus for various con-
               ditions. Four references.

Institution : Moscow Engineering Physics Institute*

Submitted   : December 4, 1954

* Moskovskiy inzhenerno-fizicheskiy institut

Myamlin, V. A.

Calculation of the quadrupole moment of a nucleus during scattering of electrons. V. A. Myamlin. *Soviet Phys.*, *JETP* 2, 163-5(1956)(Engl. translation).—See *C.A.* 50, 70b.

B. M. R.

$M ; H M L J Y , L A.$

AUTHORS: Levich, V.G., Myamlin, V.A.   76-11-11/35

TITLE: The Motion of Mercury Drops in a Field of Gravity and in a Magnetic
             Field (Dvizheniye rtutnykh kapel' v pole tyazhesti i v magnitnom
             pole)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1957, Vol. 31, Nr 11, pp. 2453-2457 (USSR)

ABSTRACT: Here the motion of mercury drops in the electrolyte is investigated,
             where the total system is located in the field of gravity and the mag-
             netic field. The computation, which was carried out in a system in
             which the drop was located, resulted in the following: Besides the
             vertical fall in the field of gravity an additional motion of the drop
             is created in a direction which is vertical to the field of gravity
             as well as to the magnetic field. The value for the velocity of motion
             is obtained and its order of magnitude is evaluated. There is 1 Slavic
             reference.

Card 1/2

. The Motion of Mercury Drops in a Field of Gravity and in a Magnetic Field $76-11-11/35$

ASSOCIATION: Moscow Physical-Engineering Institut (Moskovskiy inzhenerno-fizicheskiy institut)

SUBMITTED: June 30, 1956

AVAILABLE: Library of Congress

Card 2/2

5(4)

AUTHORS: Vdovin, Yu. A.,   SOV/20-124-2-31/71
Levich, V. G., Corresponding Member, AS USSR,
Myamlin, V. A.

TITLE: The Volt-ampere Characteristic of the Contact Electrolyte-
electron-semiconductor (Vol't-ampernaya kharakteristika
kontakta elektrolit-elektronnyy poluprovodnik)

ABSTRACT: An oxidation-reduction reaction of the type $A^+ + e \rightleftharpoons A$ is
assumed to occur during passage of the current. For reasons of
greater simplicity it is assumed that the ion concentration
on the surface of the reaction is sufficiently great and that
its supply from the interior of the solution is not a limiting
stage of the above-mentioned reaction. The potential drop
in the electrolyte is neglected, which is justified if the
solution contains an addition of an indifferent electrolyte of
sufficiently high concentration. First, the basic equations
are written down, which connect the amperage, the charge
density, and the electric field strength in the semiconductor
with one another: $j = eu[En + (kT/e)(dn/dx)]$ $(e > 0)$,

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The Volt-ampere Characteristic of the Contact   SOV/20-124-2-31/71
Electrolyte-electron-semiconductor

$\mathrm{div}\ \vec{E}\ =\ -(4\pi e/\varepsilon)(n - (n_{\infty}^{2}/n))$. Here u denotes electron mobility, n - their concentration, n_{∞} - the concentration of the electrons within a domain that is sufficiently far from the contact. Such a selection of the charge density ϱ corresponds to the weakly ionized donor-levels. The above-mentioned system of equations can also be written down in dimensionless form: $(dz/dt) - zy - \lambda = 0$, $(dy/dt) = z - (1/z)$. Contrary to what is the case in metal, concentration in a semi-conductor may vary considerably. A generalized formula for the slowed-down discharge is written down. An auxiliary function is introduced for the solution of the dimensionless equation. First, the equation for this auxiliary function for low amperages is solved $(\lambda \ll 1)$. An expression is written down for the entire voltage drop in a Helmholtz layer and in the semiconductor (after deduction of the ohmic voltage drop). After some further steps an expression is obtained for the volt-ampere characteristic. Next, the currents flowing in the locked direction are investigated. In this case the width of the united layer increases, and an expression for the

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The Volt-ampere Characteristic of the Contact   SOV/20-124-2-31/71
Electrolyte-electron-semiconductor

volt-ampere characteristic corresponding to this case is
written down. In this case the dependence of the potential on
amperage is essentially determined by Tafel's law. The
authors then deal with the non-locked direction. The
rectifier effect depends both on the electrochemical reaction
taking place in the semiconductor and on the properties of the
semiconductors. The discussed system has marked rectifier-
properties under the conditions investigated. The results
of this paper apply also if different reactions predominate
at different directions of the current. There are 4 references,
3 of which are Soviet.

ASSOCIATION: Moskovskiy inzhenerno-fizicheskiy institut (Moscow Engineering
              Physics Institute)

SUBMITTED: September 27, 1958

Card 3/3

24. 7709
5(4)

67267
SOV/20-129-4-51/68

AUTHORS: Vdovin, Yu. A., Grafov, B. M., Myamlin, V. A.

TITLE: The Rectifying Action of Electrolyte - Electronic Semiconductor Contact

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 4, pp 827-830 (USSR)

ABSTRACT: The authors investigate the processes on the phase boundary between an electronic germanium semiconductor and an electrolyte in consideration of holes on the assumption that donor levels are fully ionized, acceptor levels are fully occupied, and impurity levels are uniformly distributed in the semiconductor volume. In this case, different electronic conditions prevail than in the anodic dissolution of n-Ge (Ref 2). If, in the system investigated by the authors, the contact layer was poor both in electrons and in holes, a special rectifying effect occurred, which was not due to p-n transition. The system of equations for the semiconductor is written down and the voltage drop ψ_a is calculated. The volt-ampere characteristic corresponding to the equations (12) - (15) is shown in

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The Rectifying Action of Electrolyte - Electronic Semiconductor Contact

67267
SOV/20-129-4-31/68

figure 1. It shows a characteristic stage in which the curve nearly takes a perpendicular course as well as a very low barrier current. There is a peculiar breakdown voltage ψ^*, which, as to order of magnitude, corresponds to the width of the forbidden zone. The results obtained hold in the same manner also for the contact electrolyte - holes semiconductor. It is finally said that the authors thank V. G. Levich, Corresponding Member, AS USSR, for his valuable advice. Mention is made in the text of Yu. V. Pleskov and B. N. Kabanov. There are 1 figure and 3 Soviet references.

ASSOCIATION: Institut elektrokhimii Akademii nauk SSSR (Institute of Electrochemistry of the Academy of Sciences, USSR)

PRESENTED: July 6, 1959, by A. N. Frumkin, Academician

SUBMITTED: July 6, 1959

Card 2/2

27690
S/076/61/035/009/C15/C15
B124/B101

$24.7400 \; (1055, 1160, 1555)$

AUTHOR: Myamlin, V. A.

TITLE: Estimation of the surface conductivity of the germanium -
               electrolyte contact

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 9, 1961, 2166-2167

TEXT: The chief starting point for the calculations performed in this
paper are the assumptions concerning the properties of the germanium -
electrolyte contact given in Ref. 1 (Yu. A. Vdovin, V. G. Levich, V. A.
Myamlin, Dokl. AN SSSR 126, 1296, 1959). The conductivity established
near the contact differs from that of the homogeneous semiconductor, which
is due to different potentials, ionic densities, and mobilities of the
current carriers on the surface and in the semiconductor. The surface con-
ductivity σ_p of the semiconductor is determined from the equation

$\sigma_p = G_p \mu_{eff}$ (1), where G_p is the total charge of the holes per unit sur-
face, and μ_{eff} the surface mobility of the holes. For G_p, the relation

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$E_c/4\pi = G_p$ (4) holds, where E_c is the electric field of the semiconductor contact. For μ_{eff}, the relation $\mu_{eff} = (2\alpha/\sqrt{\pi})\mu_{vol} = (2\sqrt{2mkT}/\sqrt{\pi}\ eE_c\tau)\mu_{vol}$ (8) holds, where τ is the relaxation time in germanium, and μ_{vol} the conductivity in the semiconductor volume. Hence, it follows that the effective mobility is much less than μ_{vol}, since $\alpha \ll 1$. More accurate values for μ_{eff} are calculated from the equation $\mu_{eff} = (1/\pi^{3/2})\sqrt{kT/m}$. If m characterizes the mass of an electron, and conditions at room temperature are taken, then the following relation holds for the surface conductivity of the semiconductor: $\sigma_p = (1/\pi^{3/2})\sqrt{kT/m} = 10^6$ CGSE $= 10^{-6}$ 1/ohm. In an analogous way, the equation $\sigma_p^e = G_e \mu_{vol}^e$ is obtained for the electrolyte. Since not the whole surface is electrically charged, $|G_e| = |G_p| = E_c/4\pi$. The relation $\mu_{vol}'' = 5 \cdot 10^{-4}$ cm^2/sec·v holds for the mobility of the electrolyte. Since the electric field intensities in germanium are less than 10^{10} v/cm, $\sigma' \ll \sigma_p$. Thus, the surface conductivity of electrolyte ions is insignificant. Thanks are given to V. G. Levich, Card 2/3

27690
S/076/61/035/009/015/015
Estimation of the surface ...   B124/B101

Corresponding Member of the AS USSR. There are 2 references: 1 Soviet
and 1 non-Soviet. The reference to the English-language publication
reads as follows: J. R. Schrieffer, Phys. Rev. 97, 641, 1955.

SUBMITTED: March 31, 1961

Card 3/3

23855

S/020/61/137/006/017/020
B101/B201

$24.2300 (1158, 1482, 1160, 1147)$

AUTHORS: Myamlin, V. A., Kibardin, V. A., and Gurevich, Yu. Ya.

TITLE: Effect of a magnetic field upon the motion of particles in
              electrolyte solutions

PERIODICAL: Doklady Akademii nauk SSSR, v. 137, no. 6, 1961, 1405-1408

TEXT: The present paper deals with a field of research that, in the authors'
opinion, has been little investigated so far. Still, findings in this
respect may be useful in the study of the structure of particles, such as:
determination of their viscosity, their surface charge, the hardness of their
surface layer. Such problems may, for example, arise in biology. For their
purposes, the authors proceeded from a spherical drop with radius a situated
in an electrolyte, the latter being traversed by a flow caused by the elec-
tric field $\vec{E}$. The magnetic field $\vec{H}$ is applied in perpendicular thereto.
$\vec{E}$ and $\vec{H}$ are homogeneous and constant at a distance from the particle. The
coordinate origin is assumed to be situated in the center of the particle,
the polar axis to be oriented alongside $\vec{E}$, the azimuthal angle φ to be
measured from the plane zx, and the y axis to be oriented alongside $\vec{H}$. The

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S/020/61/137/0C6/017/020
B101/B201

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particle is assumed to be immobile, and the liquid to flow with the velocity U_0. I) If there is no flow through the drop, the following relations are written for the components of force:

$F_r = (\kappa EH/c)(1 + a^3/2r^3)\sin\theta\cos\varphi$; $F_\theta = (\kappa EH/c)(1 - a^3/r^3)\cos\theta\cos\varphi$; $F_\varphi = (-\kappa EH/c)[1 - a^3/r^3 + (3a^3/2r^3)\sin^2\theta]\sin\varphi$ (3). Since in fields achieved in practice the velocity is low, and motion has a viscous character, the system of hydrodynamic equations receives the form: outside of the drop $\nabla p = \mu\Delta\vec{v} + \vec{F}$; div $\vec{v} = 0$ (4) inside the drop: $\nabla p_1 = \mu_1\Delta\vec{v}_1$; div $\vec{v}_1 = 0$ (5).

The following boundary conditions hold for $r = a$: $v_r = v_{1r} = 0$; $v_\theta = v_{1\theta}$; $v_q = v_{1qi}$; $p_{rr} = p_{1rr}$; $p_{r\theta} = p_{1r\theta}$; $p_{r\varphi} = p_{1r\varphi}$ (6). The following solution is written for Eq. (4) and Eq. (5): $v_r = f(r)\sin\theta\cos\varphi$; $v_\theta = g(r)\cos\theta\cos\varphi$; $v_\varphi = \sin\varphi[h(r) + t(r)\sin^2\theta]$; $p = \mu s(r)\sin\theta\cos\varphi$ (7). The function for the radius are derived from Eq. (4) and Eq. (7), and the following is found for a solution: outside of the drop $f = k/r^3 + L/r + U_0$; $g = (B - K)/2r^3 + (L + \lambda)/2r + U_0$; $t = B/r^3 + \lambda/r$; $s = (L + \lambda)/r^2 - 4\lambda r/a^3$; $h = -g$ (9), where $\lambda = EH\kappa a^3/4\mu c$. Inside the drop ($\lambda = 0$): $f_1 = M + Nr^2$;

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$g_1 = M + r^2(2N + A/2)$; $t_1 = Ar^2$; $s_1 = 10Nr$; $h_1 = -g_1$ (10). A, B, M ... are the integration constants, calculated on the basis of boundary conditions (6). The particle is found to move in perpendicular to the electric and magnetic field with the velocity $U_0 = (\chi a^2 EH/2\mu c) \left[(\mu + \mu_1)/(2\mu + 3\mu_1) \right]$ (12). This magnetophoresis attains for $H = 10^4$ gauss, $j = 10^3$ a an order of magnitude of 0.1 cm/sec. II) If the particle has a surface charge ε, an electrophoresis will arise in addition. If the thickness of the electric double layer is assumed to be considerably smaller than the radius of the particle, one may write for the potential outside of the particle:

$\varphi = \left[r + (1/2 - \varepsilon V_0/\chi Ea)a^3/r^2 \right] E \cos\theta$ (15). V_0 is put equal to the velocity of electrophoresis: $V_0 = \varepsilon Ea(2\mu + 3\mu_1 + \varepsilon^2 \chi)$ (16). The following relation is written for the motion of the charge in the inner layer of the double layer: $F_1 = (2V_0 \varepsilon H/ac)\vec{e}_x$ (17), where $\vec{e}_x$ denotes the unit vector in the direction of the x-axis. The effect of the magnetic field upon the double layer is equal to zero. Equations (4) and conditions (6) remain valid. For the magnetophoresis one finds in this case:

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$U = U_0 \left[1 + (8\mu + 15\mu_1)/(\mu + \mu_1) \right] (\epsilon V_0/\kappa Ea)$ (20), where U_0 is determined from Eq. (12), V_0 from Eq. (16). If the particle is solid, so that Eq. (17) is abolished, then $U = U_0 (1 + \epsilon V_{sd}/\kappa Ea)$ (21), where V_{sd} is the velocity of the electrophoresis of the solid particles: $V_{sd} = \epsilon Ed/(\mu + \epsilon^2 d/a\kappa)$ (22). d is the thickness of the double layer. If the viscosity μ is negligible, it will follow from Eq. (21): $U_{sd} = 2U_0$ (23). This shows that uncharged solid particles in a magnetic field are separable from charged liquid particles. N. G. Levich, Corresponding Member AS USSR, is thanked for discussions. There are 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc. The reference to English-language publication reads as follows: D. Leenov, A. Kolin, J. Chem. Phys., 22, 4, 683, (1954).

ASSOCIATION: Institut elektrokhimii Akademii nauk SSSR (Institute of Electrochemistry, Academy of Sciences USSR)

PRESENTED: December 6, 1960, by A. N. Frumkin, Academician

SUBMITTED: November 2, 1960

Card 4/4

27263

/   5.4700   1273, 1530 also 1043 1138   S/020/61/.19 00F 017 02;
B103/B206

AUTHOR: Myamlin V. A.

TITLE: Theory of anodic dissolution of silicon

PERIODICAL: Akademiya nauk SSSR. Doklady. v. 139. no. 5. 196' '153-''56

TEXT: The author establishes the differences between the anodic dissolu
tion of silicon and that of germanium The formation of carriers in the
Dotye layer has to be considered, although the holes necessary for the
dissolution of silicon are brought into contact also by two kinds of
mechanisms: a) by the forces of the electric field, and b by the diffu
sion mechanism. The maximum current passing through the contact will thus
be increased. Without considering the current due to the formation of
holes, the saturation current $j_{sat} = (r-m)/n^2 D_-e^2 \mu (Q/L,$ ') w.id te
the same as in the case of Ge with n_i being the number of carriers in the
silicon specimen itself. n is related to the width of the forbidden
band ΔE by $n_1 \approx e^{\Delta E/2kT}$ (2). ΔE of Si being much broader than that of
Ge, j_{sat} of Si must be much less than that of Ge. This is however in
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Theory of anodi...

contradiction with experimental data according to which the limiting
currents of Si and Ge are of the same order of magnitude. The formation
of carriers in the semiconductor is thus fully considered. The carriers
may be formed either by surface recombination or by volume recombination
Basing on data by J. P. Flynn (Ref. 2, J. Electrochem. Soc. 105, ...
(1958)), and on the formula (25) by Yu. A. Vievin, V. G. Levich,
V. A. Myamlin (Ref. 3, DAN 126, No. 6 (1959)) the author states that
the value of surface recombination required for passing through the currents
occurring in Si is too high to be observable in practice. He concludes
therefrom that the formation of carriers in the contacting layer has to be
considered. As far as the volt ampere characteristic of the anodic dis-
solution of n type silicon is concerned, the author indicates the existence
of two characteristic lengths in Si which is in contact with an electrolyte.
1) diffusion length and 2) Debye length, where 1) > 2). At distances of the
order of magnitude of a diffusion wave, the density of the main carriers
does not essentially change. Weak electric fields appear in the diffusion
range (called quasi neutral). The equations for the characteristic physi-
cal quantities in this range are analogous to those of the germanium
theory ((1') to (4') of Ref. 3. In the following, the author uses the

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S/020/61/139/005/017/021
B103/B208

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notations of Ref. 3). The hole density and the hole current are inter related by $p = b + \lambda_+/\sqrt{AK}$ (3). In the region adjacent to the electrolyte, the potential drop is most pronounced and the carrier density varies considerably. The n - p junction lies in the same region. The author further assumes that the surface at the contact is enriched in holes. On the other hand, the region adjoining the quasi-neutral one has few carriers. For Si, the formation of carriers in this region is important. In this case, $n \ll 1$ and $p \ll 1$. The processes taking place here are described by (4) - (7): $dz/dt = zy + \lambda$; (4). $dp/dt = -py - '/k\lambda$; (5). $d\lambda/dt = A_1(zp - b)$; (6). $dy/dt = z - p - '$ (7) where $A_1 = \mu_+/\left[(n + n_1) \tau_p + (p + p_1)\tau_n\right] u_{kT} x^2$ with $n_1 = n_1/N \exp(E_t - E_1)/kT$; $p_1 = n_1/N \exp(E_1 - E_t)/kT$; n_1 is the number of electrons in the semiconductor itself. N n and pN, respectively, are the electron and hole densities at the points where recombination takes place; τ_{n_0} = lifetime of electrons introduced into an n-type specimen; τ_{p_0} = lifetime of holes introduced into a p type specimen;

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Theory of anodic. .

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B·O3/B208

E_t = energy of the trap; E_1 - Fermi level in the semiconductor itself.
Assuming that $n \ll n_1$, $p < p_1$, the author obtains the following expression:
$A_1 = eN_-/n_1 \left[\tau_{p_0} \exp(E_t - E_1)/kT - \tau_{n_0} \exp(E_1 - E_t)/kT \right]$ V_kTw . The author

derives two equations which correlate y_k and λ with the total current λ.
$(r/(m + r))\lambda = A_1(\lambda_+(t_0)/\sqrt{A_k})y_k$ (13); $y_k = 2 \ln (t + \lambda (t_0)/\sqrt{A_k}$, (14).
Eqs. (13) and (14) are parametric equations determining the potential ψ
as a function of the total current λ At relatively high potentials and
currents, these equations may be solved if the relation t $\lambda (t /\sqrt{A_k}$

$= \eta \ll b$ is fulfilled. Then one finds $\psi = \cdot / 2b^2 A_1^2 (r/(r - m))^2 \lambda^2$

$+ 1/\beta \ln \lambda_1/\lambda$ (15). The results obtained are in quantitative agreement

with experimental values. Actually, the first term in (15) is negligible
at small λ, and the current is a logarithmic function of the voltage. At
high currents, the parabolic dependence of the current on the voltage
becomes the decisive factor. The value of current λ_1 may be estimated.

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at which the logarithmic dependence changes to a parabolic one. For this purpose, the derivatives $d/d\lambda 1/\beta \ln\lambda = d/d\lambda 1/2b^2 A^2 (r/(m + r)^2 \lambda^2$ are set equal to each other. From this one obtains the value $\lambda_1 \approx bA$, or, when proceeding to the dimension variable, the value

$$j_1 = en_i / \left[\tau_{p_0} \exp(E_t - E_i)/kT + \tau_{n_0} \exp(E_i - E_t)/kT \right] \mathfrak{a} \quad (16) \quad \text{where } 1/\varkappa \text{ is}$$

the length of the charged Debye range. Eq. (16) agrees with the data of Ref. 2. The dependence of the current on the silicon resistance in the parabolic range may be determined from Eq. (15). $j \sim \sqrt{R\rho}$ is approximately valid. The author thanks V. G. Levich, Corresponding Member AS USSR, for a valuable discussion. There are 4 references: 2 Soviet-bloc and 2 non Soviet-bloc. The references to English-language publications read as follows: Ref. 2: J. B. Flynn, J. Electrochem Soc 105, 715 (1958). Ref. 4: W. Schockley, W. T. Read, Phys. Rev., 87, 835 (1952).

ASSOCIATION: Institut elektrokhimii Akademii nauk SSSR (Institute of Electrochemistry of the Academy of Sciences USSR)

Card 5/6

MYAMLIN, V.A.

Polarization curve of the anodic dissolution of germanium of
finite dimensions. Dokl. AN SSSR 140 no.4:870-873 O '61.
(MIRA 14:9)

1. Institut elektrokhimii AN SSSR. Predstavleno akademikom
A.N.Frumkinym.
          (Germanium) (Polarization (Electricity))

LEVICH, Veniamin Grigor'yevich; VDOVIN, Yuriy Aleksandrovich;
    MYAMLIN, Viktor Alekseyevich; LIVSHITS, B.L., red.;
    ALEKSEYEV, A.I., red.; BRUDNO, K.F., tekhn. red.

    [Course in theoretical physics]Kurs teoreticheskoi fiziki.
    Moskva, Fizmatgiz. Vol.2.[Electromagnetic processes in mat-
    ter]Elektromagnitnye protsessy v veshchestve. Kvantovaia
    mekhanika. Pod red. V.G.Levicha. 1962. 819 p. (MIRA 16:3)

    1. Chlen-korrespondent Akademii nauk SSSR (for Levich).
        (Electromagnetism)   (Quantum theory)

L 12731-63   EWT(m)/BDS   AFFTC/ESD-3   RH
ACCESSION NR: AP3002284   S/0062/63/000/006/1011/1017

57

AUTHOR: Myamlin, V. A.; Grafov, B. M.

TITLE: Capacity and resistance of a contact-semiconductor of the germanium-electrolyte type

~7

SOURCE: AN SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 6, 1963, 1011-1017

TOPIC TAGS: germanium-electrolyte type semiconductor, electrode reaction current

ABSTRACT: An expression is given for the impendance of contact of a semiconductor type with an electrolyte, with a consideration of the displacement and electrode reaction current. The resistance and capacity of the contact depends only on those frequencies that are comparable with the frequency of generation and recombination of the electrons and on the holes in the semiconductor. "The authors express deep gratitude to V. G. Levich for valuable criticisms." Orig. art. has: 24 formulas and 1 figure.

ASSOCIATION: Institut elektrokhimi Akademii nauk SSSR (Electrochemical Institute, Academy of Sciences SSSR)

Card   1/2/

L 16595-63   EWT(1)/EWT(m)/EWG(k)/BDS/EEC(b)-2   AFFTC/ASD/ESD-3/IJP(C)
Fz-4   AT/RH   S/074/63/032/004/002/002

AUTHOR: Myamlin, V. A. and Pleskov, Yu. V.   7/

TITLE: The electrochemistry of semiconductors

PERIODICAL: Uspekhi khimii, v. 32, no. 4, April 1963, 470-500

TEXT: This is a extensive summary of currently-available information on
the electrochemistry of semiconductors, the study of which in the USSR was
initiated by Ye. A. Yefimov and L. G. Yerusalimchik, and continued by the
Institut elektrokhimii AN SSSR (Institute of Electrochemistry of the Academy
of Sciences USSR) and the Fiziko-khimicheskiy institut im. L. Ya. Karpov
(Physico-Chemical Institute im. L. Ya. Karpov). The authors deal with a semi-
conductor-electrolyte system in an equilibrium state, the kinetics of electron
reactions (with delayed electrochemical stage, delayed diffusion of nonalkaline
carriers, etc.) chemical corrosion, and the use of electrochemical methods for
treating the surface of semiconductors for practical and experimental purposes.
The physical processes studied are defined by some 60 equations and several graphs.
There is a bibliography of 247 items.

ASSOCIATION: Institut elektrokhimii AN SSSR (Institute of Electrochemistry,
Card 1/1   Academy of Sciences, USSR)

L 64292-65   EWT(m)/EWA(d)/T   GS

ACCESSION NR: AT5020454   UR/0000/64/000/000/0105/0109

AUTHOR: Myamlin, V. A.; Grafov, B. M.

TITLE: Using capacitance measurements for studying the surface properties of an electrolyte-semiconductor interface

SOURCE: Mezhvuzovskaya nauchno-tekhnicheskaya konferentsiya po fizike poluprovodnikov (poverkhnostnyye i kontaktnyye yavleniya), Tomsk, 1962. Poverkhnostnyye i kontaktnyye yavleniya v poluprovodnikakh (Surface and contact phenomena in semiconductors). Tomsk, Izd-vo Tomskogo univ., 1964, 105-109

TOPIC TAGS: surface property, crystal surface, semiconductor theory, electrolyte, electrolytic capacitor, electrochemistry

ABSTRACT: In a brief survey of the literature, the authors present some of the basic concepts of semiconductor electrochemistry together with theoretical calculations of processes which take place at the electrolyte-semiconductor interface. The following problem is proposed and solved. A certain direct current is passed through an electrolyte-semiconductor interface. A weak alternating signal of frequency ꞷ is superimposed on the direct current for measuring capacity and resistance. The capacity and resistance are calculated as a function of the frequency

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L 64292-65

ACCESSION NR: AT5020454

of the current i. The calculations are made on the supposition that holes must be supplied from the depth of the semiconductor in order for an electrolytic reaction to take place at the contact. It is further assumed that the region of volume charge in the semiconductor is poor in electrons and holes, so that the total charge in the semiconductor is determined completely by ionized donor levels. The capacitance and resistance are found as a function of the applied dc voltage. This relationship is shown in fig. 1 of the Enclosure. The shapes of the curves are explained. "The authors are grateful to corresponding member AN SSSR V. G. Levich for useful consultation." Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 06Oct64   ENCL: 01   SUB CODE: EC, GC

NO REF SOV: 004   OTHER: 006
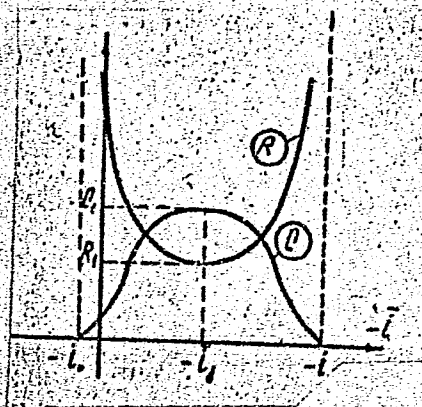
Card 2/3

ENCLOSURE: 01

Fig. 1. Behavior of resistance
and capacitance of the contact
as a function of the polarizing
current.

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MYAMLIN, V.A.; GUREVICH, Yu.Ya.

Capacitance, resistance, and injection coefficient of a
semiconducting electrode in redox reactions. Dokl. AN SSSR
155 no.1:164-167 Mr '64.   (MIRA 17:4)

1. Institut elektrokhimii AN SSSR. Predstavleno akademikom
A.N.Frumkinym.

GUREVICH, Yu.Ya.; MYAMLIN, V.A.

Faraday's rectification of the contact electrolyte - semiconductor.
Dokl. AN SSSR 155 no. 5:1159-1162 Ap '64.   (MIRA 17:5)

1. Institut elektrokhimii AN SSSR. Predstavleno akademikom
A.N.Frumkinym.